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FACT SHEET STATEMENT OF BASIS
CANYON FUEL COMPANY, LLC
DUGOUT CANYON MINE
MINOR INDUSTRIAL RENEWAL PERMIT
UPDES PERMIT No. UT0025593

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DESCRIPTION OF FACILITY AND DISCHARGE

The Canyon Fuel Company's Dugout Canyon Mine (Dugout) is an active underground coal mine operation with *Standard Industrial Classification 1222*, for *bituminous underground coal mining operations*. The facility is located approximately 12 ½ miles northeast of Wellington, Utah in Dugout Canyon off Nine Mile Canyon Road. It has a total of six permitted discharge points (Outfalls 001 thru 006). Outfalls 001 and 005 are mine water discharges which go to Dugout Creek and Pace Canyon Creek, respectively and are the main discharges from Dugout. Outfall 002 is from a sedimentation pond which collects surface water runoff from the main facility in Dugout Canyon and discharges to Dugout Creek once a year on average during cleaning and maintenance of the pond. Outfall 003 is from a water storage tank that intermittently discharges to Dugout Creek when full. Outfall 004 is from a sedimentation pond at the waste rock disposal site, which has not discharged to date and is not expected to discharge due to its size. If a discharge were to occur, it would go to an unnamed tributary of Grassy Trail Creek. Outfall 006, which has also not discharged to date, is from a sediment pond trap that collects surface water runoff from the Pace Canyon fan portal breakout facility and would discharge to Pace Canyon Creek. Outfall 007 is from a sedimentation pond at the waste rock disposal site, which has not yet been constructed and is not expected to discharge due to the pond retention size.

In a letter dated December 8, 2014 to DWQ, Dugout requested an additional UPDES outfall. This request is due to the need to construct a new sediment pond for additional waste rock disposal capacity. The design and construction of this pond and additional capacity will be permitted with and overseen by, the Utah Division of Oil Gas and Mining (DOGM), in accordance with the Surface Mining Control and Reclamation Act (SMCRA). The effluent limitations for Outfall 007 will be the same as Outfall 004.

RECEIVING WATERS AND STREAM CLASSIFICATIONS

Dugout Creek is the receiving water for outfalls 001, 002, and 003. An unnamed tributary to Grassy Trail Creek is the receiving water for 004 and 007. Outfalls 005 and 006 discharge to Pace Canyon Creek. The classifications for these receiving waters are as follows:

> Class 2B – protected for secondary contact recreation such as boating, wading, or similar uses.

Class 3C – protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 – protected for agricultural uses including irrigation of crops and stock watering.

DISCHARGE MONITORING RESULTS

The discharge monitoring results (DMRs) for the past 5 years were reviewed. Nine effluent limitation exceedances were reported. No enforcement actions were taken on these exceedances since they occurred over numerous years, some were in relation to very large storm events and Dugout Canyon Mine has been responsive to the events.

Monitoring Period	Outfall	Parameter	Limit type	Limit (mg/L)	Reported Value (mg/L)
June 2009	001A	Total Iron	Daily Max	1.1	1.6
October 2010	005A	Total Iron	Daily Max	1.1	3.4
November 2010	005A	TDS	Daily Max	2,400	4,080
January 2011	005A	Total Iron	Daily Max	1.1	1.7
January 2011	005A	TDS	Daily Max	2,400	3,710
September 2013	002A	Total Iron	Daily Max	1.1	1.46
September 2013	002A	TSS	Daily Max	70	87
			7 day Max	35	68
			30 day average Max	25	38.75

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in *40 Code of Federal Regulations (CFR) Part 122.44* and in *UAC R317-8-4.2*, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (*UAC R317-1-3.2*) or Utah Water Quality Standards (*UAC R317-2*). In cases where multiple limits have been developed, those that are more stringent apply. In cases where no limits have been developed, Best Professional Judgment (BPJ) may be used where applicable. "Best Professional Judgment" refers to the method used by permit writers to develop technology-based UPDES conditions on a case-by-case basis using all reasonably available and relevant data.

The following is a list of the basis for effluent limitations:

1) Since the Dugout discharge meets the EPA definition of "alkaline mine drainage," the permittee is subject to the technology based effluent limitations in *40 CFR Part 434.45*. Applicable technology based limits included in the permit are as follows:

    a. Total suspended solids (TSS) daily maximum limit of 70 mg/L.

    b. For discharges composed of surface water or mine water commingled with surface water, *40 CFR Part 434.63* allows alternate effluent limits to be applied when discharges result from specific runoff events, detailed below and

in the permit. Dugout has the burden of proof that the described runoff event occurred as described in the permit.

i. For runoff events (rainfall or snowmelt) less than or equal to a 10-year 24-hour precipitation event, settleable solids may be substituted for TSS and shall be limited to 0.5 milliliters per liter (ml/L). All other effluent limitations must be achieved concurrently, as described in the permit.

2) TSS 30-day and 7-day averages are based on Utah Secondary Treatment Standards.

3) Daily minimum and daily maximum limitations on pH are derived from Utah Secondary Treatment Standards and Water Quality Standards.

4) Total dissolved solids (TDS) are limited by both mass loading and concentration requirements as indicated below:

a. Since discharges from Dugout eventually reach the Colorado River, TDS mass loading is limited according to policies established by the Colorado River Basin Salinity Control Forum (Forum), as authorized in *UAC R317-2-4* to further control salinity in the Utah portion of the Colorado River Basin. On February 28, 1977, the Forum produced the *"Policy For Implementation of Colorado River Salinity Standards Through the NPDES Permit Program"* (Policy), with the most current subsequent triennial revision dated October 2008. Based on Forum Policy, the TDS shall be limited to one-ton per day as a sum of all discharge points, unless provisions are made for salinity-offset projects to account for any TDS loading in excess of the one-ton per day requirement. Salinity-offset provisions have previously been included in Dugout's permit as the facility remains current on the requirements included therein to account for all TDS loading in excess of one-ton per day. These provisions and requirements, as described further in both the permit and in a latter section of this fact sheet statement of basis, will remain in Dugout's renewal permit as appropriate.

b. TDS concentrations are limited by Water Quality Standards in *UAC R317-2-14*, which includes site specific criterion for impaired water bodies as developed through the total maximum daily load (TMDL) process. Although a TMDL standard has previously been established with a site specific TDS effluent limit of 3000 mg/L for point source discharges, as taken from the *Price River, San Rafael River and Muddy Creek TMDLs for Dissolved Solids – West Colorado Watershed Management Unit, Utah April 2004, p. A-25, Table A-12,* previous discharge TDS data from Dugout indicates that the permittee will be able to comply with the existing and more stringent limitation of 2,400 mg/L. Therefore based on BPJ, the TDS concentration limit of 2,400 mg/L for all discharge points will be retained in this renewal permit.

5) Limitation on flow is water quality based as presented in the Waste Load Analysis (WLA), which is described further in the following section.

6) Limitation on total iron is water quality based as presented in the WLA and a BPJ decision. The resulting total iron effluent limitation based on the 2014 WLA was 1.0 mg/L, however previous WLA resulting total iron effluent limitation were 1.1 mg/L. The 1.1 mg/L effluent limitation has been in place for the past 10 years and has been protective of environmental impacts. Based on BPJ of the permit writer, which included discussions with the waste load analyst, the total iron effluent limitation will be held at the previous permit effluent limitation of 1.1 mg/L.

7) Oil and Grease concentrations are limited to 10 mg/L by BPJ to be consistent with other industrial facilities statewide.

WASTE LOAD ANALYSIS AND ANTIDEGRADATION REVIEW

Effluent limitations are also derived using a waste load analysis (WLA), which is appended to this statement of basis. The WLA incorporates Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During this UPDES renewal permit development, a WLA and ADR were performed. An ADR Level I review was performed and concluded that an ADR Level II review was not required. The WLA indicates that the effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The discharge was evaluated and determined not to cause a violation of State Water Quality Standards in downstream receiving waters.

EFFLUENT LIMITS & SELF-MONITORING & REPORTING REQUIREMENTS

Dugout is expected to be able to continue complying with the following effluent limitations and self-monitoring and reporting requirements for Outfalls 001-007, as described below.

Parameter, Units	Effluent Limitations a/			
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Total Effluent Flow, MGD, b/	2.0			Report
Total Iron, mg/L				1.1
Total Suspended Solids (TSS), mg/L	25	35		70
Total Dissolved Solids (TDS), mg/L, c/	Report			2,400
TDS, tons/day, c/				1.0
pH, Standard Units(SU)			6.5	9.0
Oil & Grease, mg/L, d/				10

mg/L – milligrams per liter; MGD – million gallons per day

Discharge monitoring report (DMR) forms shall be submitted on a monthly basis and are due on or before the 28th day of the month after each monitoring period. For example, the DMR

form for February would be due by March 28th. A review of the past 5 years of DMR data reveals that Dugout has exceeded a few permit limitations but should be able to continue complying with the permit provisions herein. DMR data from 2008 were compiled and included as an attachment to this fact sheet statement of basis.

Listed below are the permit parameters and the associated sampling frequency, type of sample and required units, followed by the applicable permit footnotes as appropriate.

Self-Monitoring and Reporting Requirements a/			
Parameter	Frequency	Sample Type	Units
Total Flow, b/	Continuous/Twice Monthly	Recorder/Measured	MGD
Total Iron	Twice Monthly	Grab	mg/L
TSS	Twice Monthly	Grab	mg/L
TDS, c/	Twice Monthly	Grab	mg/L & tons/day
pH	Twice Monthly	Grab	SU
Oil & Grease, d/	Twice Monthly	Visual, Grab	Yes/No, mg/L

There shall be no visible sheen or floating solids or visible foam in other than trace amounts upon any discharges and there shall be no discharge of any sanitary wastes at any time.

a/ See Definitions, *Part I.A* of the permit, for definition of terms.

b/ The maximum monthly average of 2.0 MGD applies to outfall 001 only. The remaining outfalls shall report the maximum monthly average upon discharging. Flows from outfalls 001 and 005 shall be from a continuous recorder. Flows from the remaining outfalls shall be from either a continuous recorder, or measured at least twice per month upon discharging. If the rate of discharge is controlled, such as from intermittent discharging outfalls, the rate and duration of discharge shall be reported.

c/ The TDS concentration from each of the outfalls shall not exceed 2400 mg/L as a daily maximum limit. No tons per day loading limit will be applied if the concentration of TDS in the discharge is equal to or less than 500 mg/L as a thirty-day average. However, if the 30-day average concentration exceeds 500 mg/L, then the permittee cannot discharge more than 1.0 ton per day as a sum from all discharge points. As previously determined by the Director, the permittee is not able to meet the 500 mg/L 30-day average or the 1.0 ton per day loading limit. The permittee is required to continue to participate in and/or fund a salinity offset project to include the TDS offset credits as appropriate.

The salinity-offset project shall include TDS credits on a ton-for-ton basis for which the permittee is over the 1.0 ton per day loading limit. The tonnage reduction from the offset project must be calculated by a method similar to one used by the NRCS, Colorado River Basin Salinity Control Forum, or other applicable agency.

If the permittee will be participating in the construction and implementation of a new salinity-offset project, then a project description and implementation schedule shall be submitted to the Director at least six (6) months prior to the implementation date of the project, which will then be reviewed for approval. The salinity offset project description and implementation schedule must be approved by the Director and shall be appended to this permit.

If the permittee will be funding any additional salinity-offset projects through third parties, the permittee shall provide satisfactory evidence to the Director that the required funds have been deposited to the third party within six (6) months of project approval by the Director. A monitoring and adjustment plan to track the TDS credits shall continue to be submitted to the Director for each monthly monitoring period during the life of this permit. Any changes to the monitoring and adjustment plan must be approved by the Director and upon approval shall be appended to this permit.

d/ Oil and grease monitoring shall initially be a visual test. If any oil and/or grease sheens are observed visually, or there is any other reason to believe that oil and/or grease may be present in the discharge, then a grab sample of the effluent must be immediately taken and this sample shall not exceed 10 mg/L.

SIGNIFICANT CHANGES FROM PREVIOUS PERMIT

Outfall 007 has been added during this permit renewal. There are no other significant changes being proposed to the existing permit.

PRETREATMENT REQUIREMENTS

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the State of Utah's "*UPDES Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (WET) Control (Biomonitoring), Division of Water Quality, March 1999.*" Authority to require effluent biomonitoring is provided in *UAC R317-8, Utah Pollutant Discharge Elimination System and UAC R317-2, Water Quality Standards.*

The permittee is not classified as a major facility or a significant minor facility and discharges from Dugout are from intercepted ground water and/or storm water only, in which toxicity has not been an existing or a potential concern. Discharges are to ephemeral drainages and do not

normally reach down stream waters, but are rather utilized in full by local farming and ranching practices. However, upon request from DWQ and during the development of the previous permit, the permittee performed Acute Biomonitoring WET testing, using the appropriate test species and methods, resulting in no acute toxicity.

This information, along with the fact that the mine water discharges have previously and consistently been used for local irrigation and stock watering practices with no observable or reported ill effects, brings the conclusion that no toxicity is present in the effluent. Based on these considerations, there is no reasonable potential for toxicity in the facility's discharge *(per State of Utah's UPDES Permitting and Enforcement Guidance Document for WET Control)*. As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit at any time in the future should additional information indicate the presence of toxicity in the discharge.

STORMWATER REQUIREMENTS

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). Sections of the MSGP that pertain to discharges from an industrial activity have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for all areas associated with the facility. The SWPPP must be updated regularly and when storm water-related or effluent-related changes occur on the property. The SWPPP elements of this plan are required to include: 1) the development of a pollution prevention team, 2) development of drainage maps and materials stockpiles, 3) an inventory of exposed materials, 4) spill reporting and response procedures, 5) a preventative maintenance program, 6) employee training, 7) certification that storm water discharges are not mixed with non-storm water discharges, 8) compliance site evaluations and potential pollutant source identification, and 9) visual examinations of storm water discharges. The SWPPP is maintained on site and is available for review during inspections.

PERMIT DURATION

As stated in *UAC R317-8-5.1(1)*, UPDES permits shall be effective for a fixed term not to exceed five (5) years.

Drafted by:

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PUBLIC COMMENT

Began: June 25, 2015
Ended: July 27, 2015
Public Noticed in the Sun-Advocate

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12.